

## A) Run a webserver, on both Linux and Windows environments.

### a) Linux

#### 1) Install Apache HTTP Server in Ubuntu

- sudo apt update
- sudo apt install apache2

```
root@LAPTOP-KC: ~  
root@LAPTOP-KC:~# sudo apt update  
Get:1 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]  
Hit:2 http://archive.ubuntu.com/ubuntu jammy InRelease
```

```
Building dependency tree... Done  
Reading state information... Done  
162 packages can be upgraded. Run 'apt list --upgradable' to see them.  
root@LAPTOP-KC:~# sudo apt install apache2  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done
```

#### 2) Start Apache

- sudo apt install apache2
- sudo service apache2 start

```
root@LAPTOP-KC: /  
root@LAPTOP-KC:~# cd /var/www/html  
root@LAPTOP-KC:/var/www/html# sudo nano index.html  
root@LAPTOP-KC:/var/www/html# cd /  
root@LAPTOP-KC:/# sudo apt install apache2  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
apache2 is already the newest version (2.4.52-1ubuntu4.5).  
The following package was automatically installed and is no longer required:  
  libfreetype6  
Use 'sudo apt autoremove' to remove it.  
0 upgraded, 0 newly installed, 0 to remove and 162 not upgraded.  
root@LAPTOP-KC:/# sudo service apache2 start  
* Starting Apache httpd web server apache2 *
```

#### 3) Create a Simple Webpage

- cd /var/www/html/
- The default document root directory for Apache on Ubuntu is /var/www/html/

4) Create a new HTML file named index.html

- sudo nano index.html

```
root@LAPTOP-KC: /var/www/  X  +  v
root@LAPTOP-KC:~# cd /var/www/html
root@LAPTOP-KC:/var/www/html# sudo nano index.html
root@LAPTOP-KC:/var/www/html# |
```

```
GNU nano 6.2
<!DOCTYPE html>
<html>
<body>
<br>
    <h1>Welcome to Our Webpage</h1>
    <p>This is a simple webpage running on my localhost.</p>
<br>
<br>
</body>
</html>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
    <title>Our Simple Webpage</title>
    <style type="text/css" media="screen">
    * {
        margin: 0px 0px 0px 0px;
        padding: 0px 0px 0px 0px;
    }

    body, html {
        padding: 3px 3px 3px 3px;

        background-color: #ffffe6;

        font-family: pacifico;
        font-size: 11pt;
        text-align: center;
    }

    div.main_page {
        position: relative;
        display: table;

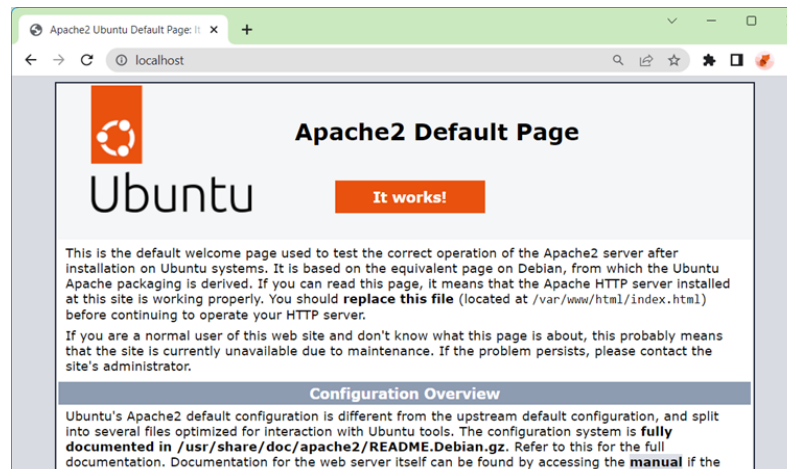
        width: 800px;

        margin-bottom: 3px;
    }

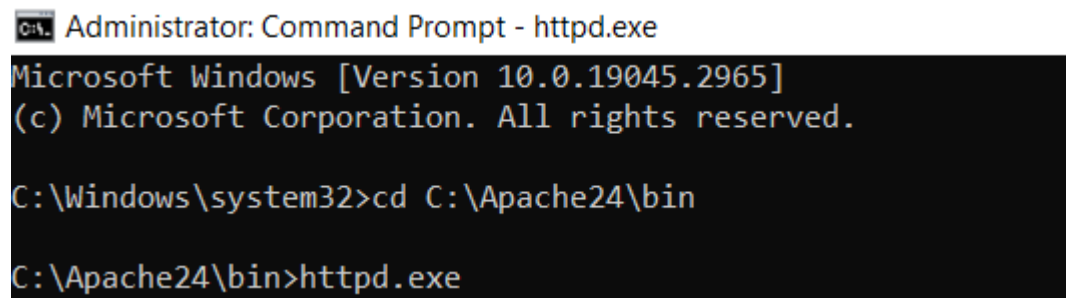
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Exec
^X Exit      ^R Read File  ^_ Replace    ^U Paste      ^J Just
```

5) Open default Apache web server page

- open <https://http://172.28.55.226> in chrome



b) Windows




B) Run on your localhost and create a simple webpage.

a) Linux


## Welcome to Our Webpage

This is a simple webpage running on my localhost.



**Faculty of Computer Science and Information Technology**  
**System And Network Administration**

### Lecturer In Charge



**Raja Azlina binti Raja Mahmood**  
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Fields of Specialization :

- Network Security
- Wireless and Mobile Networks
- Machine Learning

Academic Qualification :

- BSc., Computer Science, University of Michigan (Ann-Arbor), USA, May 1996
- MSc., Software Engineering, Universiti Teknologi Malaysia (UTM), Malaysia, Dec 1999
- Phd (ongoing) in Network Security, UPM

### Leader








**Chin Wen Ping**  
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Task of Leader :

- divides tasks among the group members and ensures coordination
- list the necessary content and subtopics related to the selected topic
- check and verify the accuracy of each point listed
- submits the assignment to the appropriate submission platform

### First Teammate



	<p><b>Lim Chiew Fung</b> 212876 212876@student.upm.edu.my</p> <p>Task of First Teammate :</p> <ul style="list-style-type: none"> <li>search and gather relevant resources related to the topic</li> <li>select specific parts from the resources, such as articles, that are relevant to the topic</li> <li>The chosen parts are written in a proper manner, incorporating them into the assignment</li> <li>expand and elaborate on the content</li> </ul>		
	<p><b>Second Teammate</b></p>  <p><b>Cheng Ke Xi</b> 212228 212228@student.upm.edu.my</p> <p>Task of Second Teammate :</p> <ul style="list-style-type: none"> <li>expand and elaborate on the content</li> <li>create a draft, outlining the key points to include in the PowerPoint presentation</li> <li>collaborate to complete the PowerPoint presentation</li> <li>takes charge of presenting the PowerPoint</li> </ul>		
	<p><b>Third Teammate</b></p> 		
	<p><b>Third Teammate</b></p>  <p><b>Kerena Natalie Nelson</b> 211276 211276@student.upm.edu.my</p> <p>Task of Third Teammate :</p> <ul style="list-style-type: none"> <li>create a draft, outlining the key points to include in the PowerPoint presentation</li> <li>collaborate to complete the PowerPoint presentation</li> <li>takes charge of presenting the PowerPoint</li> <li>consult the lecturer for guidance or clarification</li> </ul>		
	<p><b>Fourth Teammate</b></p>  <p><b>Havitra Gunalan</b> 211199 211199@student.upm.edu.my</p>		
	<p>Task of Fourth Teammate :</p> <ul style="list-style-type: none"> <li>focus on the visual design and decoration of the PowerPoint slides</li> <li>ensure that both the PowerPoint and assignment are written accurately</li> <li>adjust the report layout for a well-organized, suitable, and comfortable display</li> <li>verify the grammar in the report to ensure correctness</li> </ul>		




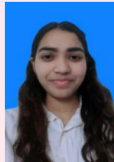

b) Window

← → ↻ 127.0.0.1

Gmail

## System And Network Administration

Team Members:

- 1. Chin Wen Ping**  
  
Matric.No: 212658
- 2. Cheng Ke Xi**  
  
Matric.No: 212228
- 3. Lim Chiew Fung**  
  
Matric.No: 212876
- 4. Kerena Natalie Nelson**  
  
Matric.No: 211276
- 5. Havitra Gunalan**  
  
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### C) Steps to install and configure the webpage.

#### a) For Linux:

- 1) Install Apache HTTP Server in Ubuntu
  - `sudo apt update`
  - `sudo apt install apache2`
- 2) Start Apache
  - `sudo service apache2 start`
- 3) Create a Simple Webpage
  - `cd /var/www/html/` (The default document root directory for Apache on Ubuntu)
- 4) Create a new HTML file named index.html
  - `sudo nano index.html`
- 5) Open default Apache web server page to make sure the web page is working properly
  - open `https://http://172.28.55.226` in chrome
- 6) Edit index.html to create a desired page
  - `sudo nano index.html`
- 7) Save index.html and refresh the web page
  - “ctrl + x” to exit
  - “y” to save modified buffer
  - Enter the correct filename
  - Refresh the page to view the changes

#### b) For Windows:

- 1) Download Apache HTTP Server and choose the version based on your windows architecture.
- 2) Copy the downloaded Apache24 file and paste into the local disk.
- 3) Then click the Apache24 file, go to bin and you can see the httpd.
- 4) Copy the path of httpd.
- 5) Open the command prompt and click on run as administrator.
- 6) Type `cd` and paste the path of httpd then press enter.
- 7) After that type `httpd.exe` and press enter again.
- 8) Will pop out Windows Security Alert and click allow access.
- 9) Go to the browser, type `127.0.0.1`.

- 10) You can see there is a message "It works!", it means you have been successful to install the Apache webserver on Windows.
- 11) Now you can create your own webpage by doing the html code first.
- 12) After the html code is done, save it in the htdocs which is inside the Apache24 file.
- 13) Go to the browser and type 127.0.0.1 again you can see the webpage that you create based on the html code.



#### D) Difficulties and Troubleshooting to install and configure the webpage.

- a) A firewall or network restriction is blocking incoming connections to the web server. To avoid this, check firewall settings and make sure the necessary ports are open for incoming traffic. By default, Ubuntu has the UFW firewall enabled. Therefore, the user needs to allow incoming HTTP traffic by running the following command "sudo ufw allow apache".
  
- b) The web server is unable to serve content correctly due to incorrect configuration settings. This may be caused by specifying the wrong file path or misconfiguring the access permissions of the web page. The solution should be to review the configuration files and correct any errors. After changing configuration files or permissions, restart the web server to apply the updates.
  
- c) The server cannot read pictures from this local disk directory. This could be due to a number of reasons including incorrect file paths, permission issues, or disk access restrictions.

In the given scenario, the solution is to upload the images to Google Drive and create a link to them. By changing the link format to display images directly, web servers can now fetch images from Google Drive and display them on web pages.

This solution works because it bypasses any local disk related issues. By hosting images on an external platform such as Google Drive, the web server no longer needs to read the images from the local disk. Images can be accessed directly via the links provided, ensuring they are displayed correctly on the web page.